
Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of

Telecommunications Relay Services and Speech-
to-Speech Services for Individuals with Hearing
and Speech Disabilities

CC Docket No. 98-67

COMMENTS OF
SBC COMMUNICATIONS INC.

SBC Telecommunications, Inc.

ALFRED G. RICHTER, JR.
ROGER K. TOPPINS
GARY PHILLIPS
WILLIAM A. BROWN

1401 I Street, N.W., 11th Floor
Washington, DC 20005
(202) 326-8904 – Telephone
(202) 408-8745 - Facsimile

Its Attorneys

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SUMMARY

In its Further Notice of Proposed Rulemaking, the Commission has sought comments on a number of highly technical and possibly far-reaching issues relating to telecommunications relay services (TRS). By these comments, SBC seeks to shed light on aspects of the Commission's proposals.

A central proposal involves granting access to SS7 technology to TRS centers in hopes of improving the quality of service and number of features to individuals with disabilities who benefit from TRS services. SBC believes that such access is not necessary and that the benefits to either users or providers would not outweigh the costs. SBC asserts that alternatives exist or can be more easily, quickly, and less expensively be developed to achieve the Commission's goals.

SBC cautions against technological fixes that may carry a big price tag. That price will be paid by consumers of telecommunications services in the form of increased fees and charges, as well as delays to network improvements and innovations in customer premises equipment and other consumer products.

Meeting the needs of individuals with disabilities is critical. This goal may be best attained by pulling all parties together in a cooperative effort to address those needs. Such an effort would better focus the expertise of users, providers, and vendors on reaching the goals of Section 225.

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SBC Communications Inc. (SBC) files these comments on its behalf and on behalf of its affiliated companies.

I. Further Rules For TRS Relay Service

In paragraph 126, the Commission asked for comments on “whether a separate nationwide access number for STS [speech-to-speech] relay service is desirable” and “whether nationwide access to relay services through 711 can meet this need.”¹ SBC contends that a separate nationwide access number for STS relay service appears desirable; however, it recognizes that the devil is in the details. Both toll-free numbers and N11 numbers (like 711) pose difficulties.

In the case of toll-free numbers, these difficulties involve questions of administration and routing. As for administration, there are a number of questions. These include

- Who chooses the 1-800 provider and places the order?
- Who is billed for the 1-800 service?

¹ *In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CC Docket No. 98-67, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 00-56, ¶ 126 (rel. March 6, 2000) (TRS FNPRM).

- Will the interstate Telecommunications Relay Service (TRS) Fund pay the entire cost or will an administrator need to be appointed to allocate costs to each jurisdiction? And, if so, by whom and how is the administrator selected?
- And, if there is competition among TRS providers, who determines how calls are routed?
- And, if calls are routed — see below — how will they be routed?

If there were competitive TRS providers, the same number would have to serve each competitor. This is essentially a routing problem. As stated above, someone would have to determine how to route the calls. One solution might involve presubscribing to a TRS service — just like subscribers presubscribe for long-distance service. End-user presubscription to a TRS provider would require, at a minimum, Feature Group D (FGD) signaling and vendor switch development.

Use of 711 is even more problematic, especially if there are competitive TRS providers. 711 is a single number. At present, the 711 number routes to one place in the network. If the TRS center providing STS is different from the TTY provider, then 711 will route to only one of them. The ability to route 711 calls based on the calling-line number — one for TTY users and one for STS users — would require a solution to be developed by central office switch manufacturers.

Other creative “solutions” — like a four digit numbers (711-1 and 711-2) — require even more complex and expensive engineering. Standard dialing plans use three, seven, and ten digits, not four. When only four digits are dialed, the switch expects seven or ten. The switch will wait for additional digits and, if additional digits are not received, the switch will recognize the lack of digits as a partial dial and provide a partial-dial announcement to the calling party. A four-digit solution would require industry-wide coordination and significant, timely, and expensive switch development.

If the goal is to give individuals with disabilities equal access to telecommunications services, the answer may not lie in modifying the network. The quicker and less expensive

remedy may lie in the customer premises equipment (CPE) and existing network-based services that provide speed dialing. Programmable CPE is already available. Such CPE can be programmed to give the calling party speed dialing to any number the party selects. Using speed dialing would allow the STS customer to select the STS center the customer prefers and to change more easily the center used at any time. Because STS is much more individualized than TTY relay, STS customers may find some centers better able to understand individual speech characteristics; this may vary in a single day with the availability of certain communications assistants on specific shifts. Indeed, the CPE can be programmed to use multiple numbers. In the wireless environment, this may be as simple as activating the "Long Press" feature on the handsets. The feature allows callers to access multiple user-defined numbers in the ADN (phone book) by pressing a single number key (1-9) for a longer than usual amount of time and enables the caller to automatically dial the number selected. What's more, many local exchange carriers (LECs) offer speed dialing as an optional service. Hence, if the present TTY equipment does not offer programming features, then the customer can use network-based calling options.

While a separate, nation-wide number for STS provider access is desirable, it may not be practical. This is especially true where less expensive and presently available technology can provide individuals with disabilities quick and convenient access to their TRS provider of choice. A toll free number with repeat digits would be a less burdensome approach but still would require a significant amount of time and money to reconfigure the network rather than improve it. Less complex and less expensive CPE based solutions should be thoroughly investigated before implementing solutions that have significant impact to networks or exhaust another of the limited N11 numbers.

II. Availability Of SS7 To TRS Centers

In paragraph 127, the Commission asked for comments on "whether 47 C.F.R. §64.1600 should be amended to include TRS providers as lawful recipients and users of SS7 [Signaling

System 7] data” and “whether the Commission has jurisdiction to allow TRS centers access to SS7 technology.”²

While the TRS centers can be given access to SS7 technology, SBC believes that it is not necessary to do so to achieve the goals of § 225. Consequently, SBC does not support any revision to 47 C.F.R. § 64.1600, making the issue of jurisdiction moot.

Access to SS7 technology sounds simple and it may seem like a panacea for problems encountered by TRS users but it carries a big price. If TRS centers were given access to SS7 technology, current tariffs would apply and, to protect end users, the TRS centers would have to agree to following industry practices for SS7. What’s more, access to SS7 technology is not the end of the question, once access is granted, there will be significant software developments and equipment costs on both ends — at the network end and at the TRS centers — to run whatever features the parties want to provide. In light of less expensive alternatives, access to SS7 technology appears unnecessary and burdensome.³

The Commission has asked for comments on “making available to TRS centers SS7 technology to allow the same information that is transferred from one common carrier to another, to be transferred from common carrier to TRS provider, and from TRS provider to common carrier . . . to obviate the need for TRS centers to manually collect the overlapping information that normally resides in the public switched telephone network.”⁴

SBC acknowledges that SS7 does allow the transfer of information between common carriers; however, the information that is transferred by SS7 varies from call to call, depending on the nature of the call. The information that is transferred between carriers can also vary based on the various policies of those carriers. For example, often the calling and called party numbers

² TRS FNPRM, ¶ 127.

³ Another consideration is the law of unintended consequences. Access to SS7 technology may represent more cure than the problem demands thereby increasing the likelihood of unintended consequences. There are systems, practices, agreements, and protocols surrounding access to and use of SS7 technology that might be unnecessarily and inadvertently impacted by the proposed change. This change ought not be undertaken lightly and without good cause.

⁴ *Id.*, ¶ 128.

are passed between carriers, but the charge number is not. Moreover, whether preferred or selected carrier information is passed depends on whether the call is processed as intraLATA toll or interLATA toll, and, when preferred or selected carrier information is passed, only the one, intraLATA toll carrier or interLATA toll carrier, related to the nature of the call is passed. Consequently, SBC would need more information on which information the Commission contemplates making available to the TRS centers to comment in any meaningful way on the costs and efforts involved. The Commission should also recognize that billing records generated by the switch are often controlled by the same switch translations that control which parameters are passed between carriers. Reconfiguring the network to pass various SS7 parameters to the TRS centers could also generate various billing records — exchange access, reciprocal compensation — that would need to be addressed.⁵

The Commission has tentatively concluded that access to SS7 will resolve the Caller-ID-Service problem, which is described as a present unwillingness of the called party to answer a call from a TRS center because the called party does not know that the call is either from a TRS center or from the calling party.⁶ SBC observes that access to SS7 will not address this concern and that, if the goal is to provide either a Caller-ID message identifying the TRS center or to provide the calling party's name and number, a solution is presently available without SS7 access.

As presently configured, SBC's TRS centers in Kansas and Arkansas identify the TRS telephone number and a calling name — "Kansas Relay Center" or "Arkansas Relay Center." The called party will not receive information on the call from the calling party to the TRS center.

⁵ Strictly speaking, SBC does not object in theory to TRS providers obtaining access to SS7 technology, as long as (1) existing tariffs are acceptable, (2) the TRS centers adopt industry practices and conventions regarding SS7 interconnection, and (3) the policy issues regarding privacy and usage of information within SS7 are addressed in some manner. As the Commission seems to acknowledge, current rules defining obligations of SS7 usage address only common carriers. SBC's reservations in this area stem from a concern that the burdens associated with such access outweigh any purported benefits to the TRS users — especially where alternative "fixes" are available under existing technologies.

⁶ *Id.*, ¶ 129 and 130.

This is because there are two separate calls involved: one from the calling party to the TRS center and another from the TRS center to the called party. Although SS7 technology would allow it, there are also other means available that allow the TRS center to send the calling party's name and telephone number into the network without the necessity of access to SS7. Any of these solutions, which would be easier, quicker, and less expensive, would require SBC to spend approximately \$300,000 to \$500,000 at its TRS centers to implement.

Calling Name Delivery is not dependent upon access to SS7 technology by TRS centers. The present system can allow a standard message to appear in the Caller-ID box if telephone accounts are established with appropriate account owner's names and telephone numbers. The simpler, quicker, and less expensive solution would be to improve the message to indicate more clearly that the called party is getting a call from the TRS center. SBC backs an industry-wide solution developed in consultation with TRS users whereby a clearly recognizable, standardized message is agreed upon. Accompanied by an outreach program to educate the hearing community. SBC proposes that the standardized name be "[STATE/COMPANY] RELAY CENTER." If the Commission prefers having the calling party's name and/or number appear, this can be accomplished. However, it would require significant time and money to invent a solution. There would also need to be a mechanism for recovering those costs.⁷

SBC presumes that the Commission is not interested in trying to split the Caller-ID message into either the name of the TRS center and the number of the calling party or vice versa. SBC would counsel against this "solution." It would offer little in the way of real benefit to the disabled community and, if technologically possible at all, would involve significant expense and reconfiguration of the present Caller-ID arrangement. Whether such an arrangement could even be accomplished and at what cost would require switch vendor involvement.

⁷ Wireless calls to a TRS center terminate the wireless connection. While the TRS provider would receive this information on the calling party, there is also no current way to forward this information back into the wireless network.

In paragraph 132, the Commission asks for comments “on the impact of the Reveal and Anonymous Call Rejection (ACR) features on TTY-to-TTY calls,” “on whether access to SS7 technology will allow relay providers to transfer emergency calls, with the originating number, to 911 operators,” and “on what new services and features SS7 could make available to TRS users and TRS centers.”⁸

ACR is a result of TRS centers not using network connections that send any calling number ahead. The network interprets these as “anonymous or private” calls, and the Caller-ID units display those designations. ACR can be eliminated by requiring TRS centers to use network connections that allow forwarding a calling number that would identify the TRS center by using the standard Calling Name Delivery feature.

With respect to the question of whether access to SS7 technology will allow relay providers to transfer emergency calls, with the originating number, to 911 operators, the simplest answer is that SS7 access — in and of itself — will not make that happen. The information in question — originating number — can be sent via out-of-band (SS7) or in-band signaling but access to SS7 does not have to be part of the solution.

To arrive at a solution, the Commission needs to remember that the type, configuration, and extent of 911 systems vary from jurisdiction to jurisdiction. For example, in some states, county-wide 911 is mandated for every county.⁹ This is primarily — if not exclusively — E911 service. In other states, there may be jurisdictions with other forms of 911 service, which are configured differently from E911 service, and/or the available 911 service may not serve the entire county; it may be limited to a municipality or other jurisdiction. Access to SS7 will not overcome these problems in the deployment of 911 services.

It is technically possible to resolve this problem, and SS7 technology does not have to be a part of it. For example, in the E911 situation, the problem can be resolved by redesigning the equipment that serves the TRS centers by placing a dedicated trunk from the TRS center to the

⁸ *Id.*, ¶ 132.

⁹ See Tex. Health & Safety Code § 771.059.

E911 tandem. The system would have to be reworked to allow the TRS center to send the calling party's number to the PSAP on the out-going leg of the call. A different but similar arrangement can be made for other 911 services. These solutions do not involve access to SS7 technology; although SBC would expect that the switches most TRS centers use would require some software development to allow them to send the calling party's number to the PSAP on the out-going leg of the call using in-band signaling.

In paragraph 133, the Commission poses a series of questions about both SS7 and FGD. The Commission expressed an interest in learning about the relative advantages and disadvantages of using FGD Automatic Number Identification (ANI) and private branch exchange (PBX) trunk signaling in lieu of SS7 technology and about the services and features that such signaling could make available to TRS centers.¹⁰ The Commission is also interested in acquiring information on the costs of SS7 technology to carriers and TRS centers.¹¹ Finally, the Commission seeks comments on the necessity of new regulations to achieve "functionally equivalent service to TRS users."¹²

FGD signaling is in-band signaling. Normally, it permits the transmission of the calling party's number and the called party's number to interexchange carriers. If the goal is to populate a Caller-ID box field with either the TRS center's name and number or the calling party's name and number, FGD and SS7 can both do the job. Access to SS7 technology might provide some additional features over FGD; however, access to SS7 would require development of software for both the central office and the TRS center in order to provide those features. There would be associated development time and costs at both ends. What's more, the TRS center would have the burdens that accompany access to SS7, burdens that are presently assumed by carriers. It is difficult to say whether the benefits gained would outweigh the costs associated with access.

¹⁰ *Id.*, ¶ 133.

¹¹ *Id.*

¹² *Id.*

III. Outreach.

The Commission has opined that a national outreach program might be helpful — especially in support of state programs.¹³ SBC supports a national outreach program. This program, however, ought not supplant or direct local efforts, but compliment them. Such a program ought to have as its aim an increased awareness of the TRS facilities and services available to all of the individuals with disabilities who could benefit from them. The program ought to direct interested persons to in-state resources for more information.

As long as there are no increases in the fees paid or charged by carriers and consumers, SBC could support funding and administering the national outreach program through the Interstate TRS Fund and amending the mission of that fund to include establishing guidelines and a procedure to fund a coordinated national outreach campaign. SBC believes that the fees and surcharges paid by consumers of telecommunications services are already too high and that an increase in such fees is not appropriate.

At present, SBC is not aware of the details of the program instituted by the State of Maryland and referred to in the TRS FNPRM and, therefore, cannot comment on the propriety of modeling the national outreach program on that state sponsored one.

Depending on the scale involved, SBC might have supported requiring a state's certification program to include outreach efforts; however, the Act, specifically Section 225(f)(2), limits the Commission's certification review.¹⁴ SBC believes that the extent of this review cannot be enlarged *sua sponte* by the Commission and that the Commission's proposal would enlarge the extent of the review. Any changes in this area must come from Congress.

IV. Technologies, Features, And Services.

In paragraph 138, the Commission has asked for comments on “features such as call release, automatic call forwarding, interrupt capability, answering machine retrieval, extended

¹³ *Id.*, ¶ 134.

¹⁴ 47 U.S.C. § 225(f)(2).

community call blocking, pay per use feature blocks, call waiting, return call and call back, three way calling, speed dialing, distinctive ring, and repeat dialing[, about which the Commission has] tentatively conclude[d] . . . are capable of being provided to relay users and . . . must be provided in order for TRS to remain functionally equivalent.”¹⁵

It is easy to presume that features commonly used by the general public — such as call forwarding, call return, and community call block — would also be appealing to people with disabilities. This is not necessarily the case. And in an ideal world, SBC presumes that such features would be equally accessible and useable. As it stands, however, for wireline and wireless customers, this level of access cannot be provided when a call and its functionality essentially end at the TRS center. Using current central office switch software and operational support systems, SBC’s LECs cannot implement these features in conjunction with TRS. Most of these features utilize line specific programming that is stored in a end-user’s local central office. SBC is not aware of any current network technology that would allow TRS centers access to this information on a call-by-call basis. As switch manufacturers are in the best position to judge the capabilities of their switches and associated software, SBC recommends that switch manufacturers be brought into this discussion. They could also provide the Commission with more accurate estimates of the potential costs associated with any necessary software development.

In that same paragraph, the Commission seeks comment on “improved transmission speed, wireless messaging services, use of the World Wide Web for voice communications, internet telephony, and any other technologies or changes to technology that may improve relay services or should be available via TRS.”¹⁶ SBC notes that Internet telephony is a new phenomenon. The extent of the challenges associated with relay services are not fully known at this time. Among the problems inherent in discussing this issue is the problem of definitions. For example, some new definitions may be necessary to distinguish between “voice over IP”

¹⁵ TRS NPRM., ¶ 138.

¹⁶ *Id.*

(VoIP) versus sending VoIP via the internet. This topic also raises regulatory issues. These regulatory issues may interfere with using the Internet for TRS services. SBC believes that the scope of these issues preclude a proper and complete consideration of the topic in this docket.

Text messages are generally sent from one wireless handset to another, without any regard to whether the calling party or the called party can hear or not. Functional equivalency for deaf users is inherent. TRS centers would need to make substantial equipment modifications to send or receive wireless text messages and could conceivably have to support many different protocols and a range of technologies. How would TRS centers be able to prevent inappropriate use of TRS by hearing individuals placing calls to other hearing individuals since the market currently has applications that support this type of communication for a fee?

SBC's wireless companies have been diligent in working with the manufacturers of network equipment and handsets to find solutions to support TTY access to wireless networks using the Baudot 45.45 protocol. SBC's wireless companies believe the Commission should avoid adopting a blanket approach that would require almost any legacy, voice-band TTY protocol to be supported over wireless networks. If the Commission moves to mandate almost any legacy technologies, such a mandate will be onerous on the wireless industry and the equipment manufacturers supporting that industry. SBC Wireless companies believe that it would be more effective to focus attention on newer text-based services than try to retrofit for limited and often obscure technologies.

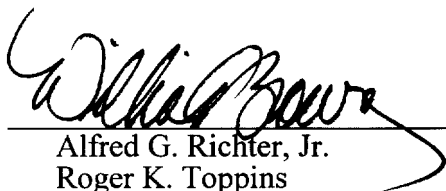
As more businesses, public services, and households become "wired" to the Internet and associated features — like email and chat services — which will be deployed over wireless networks, the market will create equipment to support these services. This equipment will be more convenient and user-friendly than trying to force older terminals to talk to new handsets by means of superimposing costly and complex modifications on the system. The marketplace and emerging technologies will better meet the long-term needs of the disabled community.

SBC has concerns about technological uncertainties surrounding these issues. A number of equipment configurations are under development, and there are unresolved issues of

compatibility between TRS equipment and the equipment a TRS user may purchase. SBC is concerned that mandating any technology on a wide basis may stymie experimentation and result in requiring technology that is inconsistent with consumer choices. SBC believes market forces should determine the technology and equipment best suited for the new world of digital communication.

Respectfully submitted,

SBC COMMUNICATIONS INC.

By: 
Alfred G. Richter, Jr.
Roger K. Toppins
Gary Phillips
William A. Brown

1401 I Street, N.W., 11th Floor
Washington, DC 20005
(202) 326-8904 – Telephone
(202) 408-8745 - Facsimile

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